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Organizational Culture: The Focus Questionnaire

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This article describes two studies. The first study concerns the development of an internationally useful questionnaire for measuring organizational culture on the basis of Quinn' s (1988) competing values model. The competing values model describes four cultural orientations. These are the support, innovation, rules, and goal orientation. The questionnaire is called FOCUS, and was developed by an international research group from 12 countries. The questionnaire consists of two parts: descriptive part (measuring organizational practices) and an evaluative part (measuring characteristics of the organization). The first study shows that seven of the eight scales meet psychometric criteria. The second study shows preliminary results regarding the influence of country and sector on organizational culture. Organizational culture is again divided into practices and values (characteristics). Sector and organization are expected to explain differences in organization are expected to explain differences in organizational practices, and country to explain differences in organizational values. The results indicate that on organizational level country influences both practices and values. Sector does not have a direct effect on practices and values. There is a sector-country interaction effect on practices and values. On the individual level organization influences both practices and values, whereas country only influences values. Sector has neither a direct nor an interaction effect on organizational culture.

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INTRODUCTION

In the last few decades of the 20th century organizations have been confronted with increasing economic competition and international co-operation. In fact, there is more international competition then ever before. For instance, the growing single European market pressures companies within and outside the European Union to search for partners. In the financial market, new mergers and acquisitions are announced daily. One two-country example is FORTIS. The company consists of a banking and insurance part. The Generale Bank, ASLK (Belgium) and VSB Bank and Mees Pierson (The Netherlands) form the banking group and AG (Belgium) and AMEV (The Netherlands) are the insurance part. Airlines are another example. World wide, five large alliances have formed. For example, the Wings Alliance consists of KLM, Northwest, Alitalia, Air China, Air UK, Kenya Air, and several other airlines. In fact, at the time of writing KLM and Alitalia are heading for a full merger. The media did, however, report some problems in this merger related to national cultural differences. For example, the Dutch got very annoyed by the constant phone calls the Italians received during meetings. On the other hand, the Italians didn't understand why dinner was served so early. The deal now is, that the Italians turn off their telephones during meetings and dinner will be served later on the evening (*Volkskrant*, 1999).

The increasing international competition and co-operation, and the emerging of free-trade zones, such as NAFTA (North American Free Trade Area) and the European market, emphasize the importance of understanding cultural aspects in a particular organizational context. In order to be able to study organizational culture across nations, an internationally useful instrument is needed. A group of researchers mainly from Europe, the so-called FOCUS group, initiated the development of such an instrument to measure organizational culture. The questionnaire is based on Quinn' s (1988) competing values approach and on the organizational climate instrument developed by De Witte and De Cock (1986). The development (the perspectives used and choices mode during the construction phase) and some of the psychometric qualities of the FOCUS questionnaire are described in this article. Furthermore, some preliminary results about the influence of country, sector, and organization on organizational culture are presented.

ORGANIZATIONAL CULTURE

Since the 1980s there has been an ongoing scientific debate between culture researchers on whether culture can be measured using quantitative methods. Some are opposed to this idea (Schwartz & Davis, 1981; Trice & Beyer, 1993; others see no profound objections (Den Hartog et al., 1999; Denison & Mishra, 1995; Hofstede, 1984, 1991; House et al., 1999). This debate is related to the

origins of the culture concept. Traditionally, culture as a scientific topic was studied by anthropologists. However, the interest in organizational culture during the 1980s and 1990s stems from at least four different sources (Brown, 1995; p. 2). These are "climate research, national cultures, human resource management, and from a conviction that approaches which emphasize the rational and structural nature of organization cannot offer a full explanation of organizational behaviour".

One of the most influential cultural anthropologists is Geertz. He searched for the meanings of symbols. "Believing with Max Weber, that man is an animal suspended in webs of significance he himself has spun. I take culture to be those webs, and the analysis of it to be therefore not an experimental science in search of law but an interpretative one in search of meaning" (Geertz, 1973, p. 5). Within the symbolic perspective, the focus of organizational culture is on how organizational members interpret and understand their work-related experiences and how these interpretations and understandings are related to action.

In an organization different interpretation patterns may exist which could be a source of conflicts and power struggle (Martin, 1992). For example, in a hospital nurses interpreted the proposed changes in co-operation between several departments in a completely different way from the physicians. The nurses thought co-operation would diminish work stress and therefore they supported the proposed changes. The physicians were opposed to these changes, because each of them would partly lose his or her "sovereign" power base.

Within this holistic perspective on culture, studying culture requires qualitative research methods (see Czarniawska-Joerges, 1992). One of these methods is ethnography, in short, ethnography is the study of the social impact of symbols in a culture over a long period of time (Cohen, 1974). "The key to understanding culture lies in a portrayal and analysis of how members of the culture structure the meanings of their world" (Barley, 1983, p. 395). In the case of organizational culture, the organization should be understood and interpreted by analysing artifacts, behavioural patterns, and other visible characteristics, and their symbolic implications. "The organizational analyst focuses on how organization members interpret their experiences, how these interpretations influence their behaviours, and, how they arrive at shared interpretations, meanings, and knowledge" (Van Muijen, 1998, p. 117). In other words, one is interested in the evolution of social systems over time.

"The current fascination with organizational culture developed in part from work on organizational climate during the 1970s" (Brown, 1995, p. 2). Organizational climate is a concept developed by psychologists. In 1939, Lewin, Lippit, and White examined the influence of experimentally created social climates (social contexts) on the behaviour of boys in a group. According to Reiches and Schneider (1990), the concept of (organizational) climate was not fully explicated until the 1970s. In general, climate refers to "a set of conditions

that exist and have an impact on individual's behaviour" (Denison, 1990, p. 24). These conditions are "objective" characteristics of an organization and can be observed in several ways. Although there is a debate among climate researcher whether climate is a property of the organization (Drexter, 1977) or of the perceiver (James, James, & Ashe, 1990), most studies on organizational climate have used quantitative methods (Ekvall, 1987). In such research, individual organizational members are asked to describe the climate by filling in a standard questionnaire regarding several conditions or systems within the organization. The main interest of climate researchers is on the impact of these conditions or systems on groups and individuals (Ekvall, 1987; Rentsch, 1990; Schneider, 1975).

In which way did the climate research contribute to the study of organizational culture? The study of culture is "the next attempt to explain the E in Lewins famous B=f(P,E) equation" (Reiches & Schneider, 1990, p. 28), that is behaviour is a function of person and environment. Culture is seen as an aspect of the organization and one is interested in understanding the interdependence of several parts of the organization in relationship with environmental variables. It is about the functional meanings of organizational culture related to other organizational variables as leadership, psychological contract, and performance. This implies "that the symbolic cultural dimension in some way contributes to the overall systemic balance and effectiveness of an organization" (Smircich, 1983, p. 344).

"In order to study a phenomenon such as organizational climate (or culture) from Lewin's perspective, the person must, by definition, be analytically separate from the social context" (Denison, 1996, p. 634). Denison, furthermore, argues that climate and culture literatures address a common phenomenon, namely "the creation and influence of social contexts in organizations" (p. 646). He states that "these two research traditions should be viewed as differences in *interpretation* rather than differences in the *phenomenon*" (p. 645; original italics).

The concept of organizational climate is rooted in psychology, with an emphasis on the perceptions of individuals. Organizational climate is measured by quantitative questionnaires. Perceptions of respondents are aggregated to a certain level; in the case of organizational climate, the organizational level. Traditionally, these perceptions or the aggregated means are related to other variables, such as satisfaction and performance. The emphasis is on generalization of the results: generalizations mode by the researcher. Culture, rooted in anthropology, is usually studied through hermeneutical research methods, such as ethnography. Here, the results are interpreted from the research object (clinical reference, see Geertz, 1973).

In contrast, climate as well as culture can also be studied as a variable within an organization. In fact most of the published studies about national culture in leading organizational journals are based on quantitative questionnaires

(Hofstede, Neuijen, Ohayv, & Sanders, 1990; House et al., 1999; Smith, Misumi, Tayeb, Peterson, & Bond, 1989, Smith, Dungan, & Trompenaars, 1996). In spite of the conceptual similarity between climate and culture, Denison (1990) suggests the maintenance of methodological differences. "Perceptions are easily measured with questionnaires, but to describe basic assumptions, decipher symbols and to unfold meanings into a richer, more complete and valid picture (or painting) one needs qualitative approaches" (Van Muijen, 1998, p. 125). Denison (1996, p. 646) suggests that "the future study of organizational *contexts* can be perhaps best be served if researchers more explicitly incorporate traditions of climate research with the culture literature". To scan national or organizational cultures one might better use questionnaires, and, in contrast, for a more comprehensive view of meaning one might better use qualitative methods. Returning to the example of the hospital, one could measure the perceptions of the nurses and the physicians quantitatively, but for a complete interpretation of their answers other methods are needed.

In the first study presented in this article, the development of the FOCUS questionnaire to measure organizational culture will be described. The FOCUS group defines organizational culture in terms of core values, behavioural norms, artifacts, and behavioural patterns, which govern the ways people in an organization interact with each other and invest energy in their jobs and the organization at large (Van Muijen, Koopman, Dondeyne, De Cock, & De Witte, 1992). The instrument is supposed to measure perceptions of descriptive and value-characteristics statements on basis of the competing values approach (Quinn, 1988) and the work of De Witte and De Cock (1986).

THE COMPETING VALUES MODEL OF ORGANIZATIONAL CULTURE

Quinn's competing values model consists of two dimensions with contrasting poles (see Fig. 1). The first dimension represents the organization's point of view. The focus can either be directed internally, which makes the organization itself, its processes, or its people, the central issue, or externally, which makes the relation of the organization with its environment the central issue. The contrasting poles of flexibility and control form the second dimension. Combining these two dimensions, four organizational culture orientations are obtained (Quinn, 1988). Organizations can score high on none, one, or any combination of the orientations. The four orientations are the support, the innovation, the rules, and the goal orientation (Van Muijen, & Koopman, 1994; Van Muijen, 1998).

Central to the *support* orientation are concepts such as participation, co-operation, people-based, mutual trust, team spirit, and individual growth. Communication is often verbal and informal. Employees are encouraged to express ideas about their work and feeling about each other. Decision making

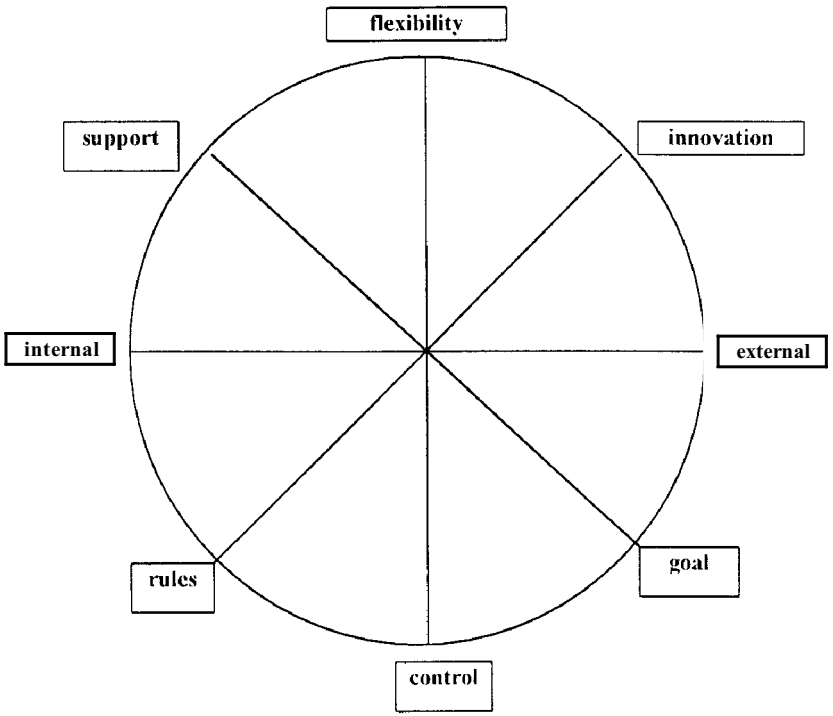

FIG. 1. The competing values model (after Quinn, 1988).

often runs through informal contacts. Commitment of the individual employee is emphasized. The *innovation* orientation is characterized by concepts such as searching for new information in the environment, creativity, openness to change, anticipation, and experimentation. Control from above is neither possible, nor required, and management expects commitment and involvement of employees. The *rules* orientation emphasizes respect for authority, rationality of procedures, and division of work. The structure is hierarchical and communication is often written and top-down. Power is based on formal authority. The *goal* orientation emphasizes concepts such as rationality, performance indicators, accomplishment, accountability, and contingent reward.

The competing values model is circumplex. In other words, the circle (Fig. 1) can be read from left to right and vice versa. Values of behavioural patterns of each orientation share some characteristics with values or behavioural patterns of the adjoining orientation. For example, the support orientation and the innovation orientation share an emphasis on flexibility and co-operation between colleagues. The innovation orientation and the goal orientation have in common an external focus. There is tension between the

values of the diametrical orientations. Stability and control (the rules orientation) are opposed to creativity and change (the innovation orientation). Team spirit and co-operation (the support orientation) contrast with contingent reward and accountability (the goal orientation). So, one would expect positive correlations between adjoining orientations and low or negative correlations between diametrical orientations (Van Muijen, Koopman, & De Witte, 1996).

STUDY 1: THE DEVELOPMENT OF THE **FOCUS** QUESTIONNAIRE

In 1989, members of the FOCUS group formulated 250 items after discussing the validity of the concepts of the competing values model in the participating countries. Half of these items were descriptive items; they measured directly observable behaviours, procedures, and policies within the organizations (for example, how many persons with personal problems are helped). The other items were value-characteristic items; they measured the perception of some typically characteristics of the organization (for example, how typical is risk taking). All items were sent to all members of the group for an expert evaluation, using a structured Q-sort technique. Items placed in the right category were retained and used in the first version of the questionnaire. This version consisted of 128 items (64 descriptive and 64 value-characteristic statements) divided equally over the four orientations. These items were tested in a pilot study.

Factor analyses based on answers of 884 respondents from eight European countries indicated that only the support and the rules orientation were measured satisfactorily. Apparently, the items of the innovative and goal orientation emphasized the processes within in the organization and not the relationship of the organization with its environment (Van Muijen, 1994). New items were formulated for these two orientations. Together with the support and rules items they formed the FOCUS'92 questionnaire.

After an expert evaluation and empirical results some of the FOCUS'92 items were skipped. For example, some negative formulated items caused problems in several countries (Van Muijen, 1994). Modifications were made which resulted in the FOCUS'93 questionnaire. The questionnaire consisted of 40 descriptive items and 35 value-characteristic items. The respondents were instructed to keep the whole organization in mind when answering the questions. Concerning the value-characteristic part of the questionnaire, respondents had to judge how characteristic the 35 items were for their organization, on a 6-point scale (from “very” or “not at all”). For the descriptive part the respondents were asked to describe on a 6-point scale how often a certain event occurred (“never” to “always”) or for how many people in the organization the event was true (“nobody” to “everyone”).

In all countries, except the USA, the items were translated into their native language by a panel of bilingual researchers. In general there was no back translation. The idea behind back translation is to control the quality of the translation of an original Anglo-Saxon questionnaire to other languages. Most often the reason for back translation is that the original researchers do not understand the language into which the instrument is translated (see Pugh, Clark, & Mallory, 1996). In our case the researchers from the participating countries formulated the items in English and during the translation phase each worked with other bilingual researchers. Following Hofstede (1984, p. 29), "a careful check by a panel bilingual if, readers familiar with the content matter is less time-consuming and may be as effective".

Sample

Each country set out to collect data from at least eight organizations in four sectors. These sectors were hospitals, finance (banks, insurance companies), food service, and industry. Some countries also collected data in the government and educational sectors. In each organization at least 5 top managers, 10–15 middle managers, and 35–40 workers filled out the questionnaire. Table 1 shows the number of organizations in each sector. In some countries it was not possible to collect data in all four sectors. In the USA, respondents only filled out the value-characteristic questions.

Mokken Analyses

To have an internationally useful instrument implies having items with similar meaning and similar psychometric characteristics in the different countries. Although within the FOCUS-meetings much attention was paid to the meaning, a psychometric check up is needed. The Mokken approach (Hemker, 1996) is useful for this purpose.

TABLE 1
The number of organizations in each sector per country

	Bel	*Cro*	*Fra*	*Gre*	*Hun*	*Ita*	*Net*	*Por*	*Rum*	*Spa*	*USA*
None										1	
Hospital	3	2	1	1	2		2	4	1	1	
Finance	3	4	2	2	3	1	1	4			1
Food	1	2		3	1	1	3	4			
Manufacturing	1	4	2	2	2		3	4	3	2	2
Administration		1					2			4	
School						2					1

Bel = Belgium; Cro = Croatia; Fra = France; Gre = Greece; Hun = Hungary; Ita = Italy; Net = The Netherlands; Por = Portugal; Rum = Rumania; Spa = Spain.

On basis of the data belonging to each country, Mokken analyses (Mokken, 1971) were performed to select items that form an unidimensional scale in each country. The Mokken approach to scaling consists of two non-parametric item response models (Hemker, Sijtsma, & Molenaar, 1995; Molenaar, 1996). These two models express the probability that a person will give a positive response to an item as a function of the person' s latent trait value (in our case the person' s perception of the organizational climate/culture) and the properties of the item (for example, the difficulty of an item). This function is known as the item Characteristic Curve (ICC). For many applications, as in our study, only the first model of monotone homogeneity is needed (Meijer, Sijtsma, & Smid, 1990).

The first model, the model of Monotone Homogeneity (MH), requires unidimensionality, local stochastic independence, and non-decreasing ICCs. If this model fits the data, it provides an ordering of persons (or their perceptions) on a scale. That is, on basis of this ordering one might conclude that in the eyes of respondents certain items form an unidimensional scale. The MH model, like all other item response models, has the advantage to the classical test theory that the assumptions of the model, such as unidimensionality, can be checked. The MH model does have a number of checks to test whether the model can be used. The best known is the H-value. In the polytomous MH model (Hemker, 1996; Molennar, 1982, 1986) the weighted H-coefficient (Molenaar, 1991) is used. This coefficient is based on Loevinger' s (1948) H-coefficient.

A necessary condition for the MH model is that the H-value lies between 0 and 1. Because a positive H-value is not a sufficient condition for the model, and low positive H-values do not lead to useful scales. Mokken (1971) suggested the lowerbound of H = .30 for practical use. This rule of thumb can also be used for the weighted H-coefficient (Hemker & Sijtsma, 1993). One application of this rule of thumb is in the scaling procedure (Mokken, 1971) that selects items that form a MH scale. This scaling procedure is a stepwise bottom-up item selection procedure that only admits items with scalability values to a scale, using the .30 lower bound. This results in a scale with an overall scalability value of .30. In this study the same procedure was used.

Results

On basis of the data, the Mokken procedure selected items that form an unidimensional scale for a certain culture orientation in a certain country. This implies that scales for a particular orientation could differ per country, both in the number of items and the H-value of the scale (H_w). In general, only items that met the criteria in all countries were used in the final scales for each orientation. Sometimes an item, which did not meet the criterion of H_w .30 in a particular country, was retained. The reason for doing so was that otherwise the reliability (Cronbach' s alpha) of the overall scale would be much lower in several countries. A restriction on this procedure was that all retained items must have

corrected item-rest correlation above .20 (see Kline, 1986). We then tested the final scales on their scalability and reliability. Tables 2, 3, 4, and 5 show the results for the descriptive items of the support, the innovation, the rules, and the goal orientation respectively.

The results indicate that the support, innovation, and goal scales are reliable. The alpha's exceed the .70 criterion (Nunnally, 1978). The rules scale has an alpha below .70. Remarkably, in each country there is a reliable scale (above .70) for the rules orientation. However, when selecting items which have a H_w .30 in all countries, only three items satisfy. This could reflect some country differences for certain items. For example, the item "do communications follow the hierarchy" has a negative loading in Croatia. This could be caused by the fact that there is no variance on this item in Croatia (see Sijtsma, 1988). The implication is that within Croatia in each sampled organization, communications always follow the hierarchy. This is in line with the high score of Yugoslavia on Power Distance Index (Hofstede, 1984).

Tables 6, 7, 8, and 9 show respectively the results for the value-characteristic items of the support, the innovation, the rules, and the goal orientation.

In conclusion all scales are reliable. They all meet Nunnally's .70 criterion.

We argued that the culture model is circumplex. To test this idea we performed partial correlation analyses. We expect negative or low correlations between diametrical orientations and positive correlations between adjoining orientations. Tables 10 and 11 show the results for the descriptive and value-characteristic part respectively. Concerning the descriptive scales, there is a slightly positive correlation and between rules and innovation, and between the goal and support orientation. The correlations between the adjoining orientations are higher. Regarding the value-characteristic scales, a negative correlation between innovation and rules is found. The correlation between goal

TABLE 2
The results of Mokken analyses for the descriptive scale of the support orientation

	Item-Rest Correlations
How many people ...	
1. with personal problems are helped?	.53
2. who wish to advance are supported by their superiors?	.61
How often ...	
3. is constructive criticism accepted?	.57
4. do managers express concern about employees' personal problems?	.61
5. are new ideas about work organization encouraged?	.58
6. do management practices allow freedom in work?	.43
H_w of the scale	.42
Cronbach's alpha	.80

TABLE 3
The results of Mokken analyses for the descriptive scale of the innovation orientation

	Item-Rest Correlations
How often ...	
1. does your organization search for new markets for existing products?	.64
2. is there a lot of investment in new products?	.48
3. do unpredictable elements in the market environment present good opportunities?	.43
4. does the organization search for new opportunities in the external environment?	.67
5. does the company make the best use of the employee skills to develop better products/services?	
6. does the organization search for new products/services?	.75
H_w of the scale	.48
Cronbach' s alpha	.82

TABLE 4
The results of Mokken analyses for the descriptive scale of the rules orientation

	Item-Rest Correlations
How often ...	
1. are instructions written down?	.33
2. are jobs performed according to defined procedures?	.42
3. does management follow the rules themselves?	.42
H_w of the scale	.33
Cronbach' s alpha	.58

TABLE 5
The results of Mokken analyses for the descriptive scale of the goal orientation

	Item-Rest Correlations
How often ...	
1. is competitiveness in relation to other organizations measured?	.48
2. is individual appraisal directly related to the attainment of goals?	.55
3. does management specify the targets to be attained?	.48
4. is it clear how performance will be evaluated?	.52
5. are there hard criteria against which job performance is measured?	.50
6. is reward dependent on performance?	.46
H_w of the scale	.38
Cronbach' s alpha	.76

TABLE 6
The results of Mokken analyses for the evaluative scale fo the support orientation

	Item-Rest Correlations
How typical ...	
1. mutual understanding	.72
2. failure is accepted	.75
3. mutual trust	.77
4. mutual support in solving work problems	.75
5. interpersonal harmony	.76
6. mutual support for non-work problems	.66
7. feeling at home	.72
H_w of the scale	.55
Cronbach's alpha	.91

TABLE 8
The results of Mokken analyses for the evaluative scale of the rules orientation

	Item-Rest Correlations
How typical ...	
1. unity of command	.54
2. compliance to standards	.62
3. compliance to rules	.60
4. procedures driven	.53
H_w of the scale	.45
Cronbach's alpha	.77

TABLE 7
The results of Mokken analyses for the evaluative scale of the innovation orientation

	Item-Rest Correlations
How typical ...	
1. risk taking	.42
2. openness to criticism	.42
3. at the forefront of new technology	.50
4. searching for new markets	.58
H_w of the scale	.34
Cronbach's alpha	.69

TABLE 9
The results of Mokken analyses for the evaluative scale of the goal orientation

	Item-Rest Correlations
How typical ...	
1. clear objectives	.66
2. ask oriented	.61
3. responsibility for performance	.57
4. efficiency	.64
5. performance measurement	.50
6. job clarity	.64
H_w of the scale	.46
Cronbach's alpha	.83

TABLE 10
Partial correlations between the descriptive scales

	Innovation	*Rules*	*Goal*
Support	.38	.27	.19
Innovation		.17	.52
Rules			.43

TABLE 11
Partial correlations between the evaluative scales

	Innovation	*Rules*	*Goal*
Support	.47	.12	.31
Innovation		–.04	.42
Rules			.63

and support is much higher than we expected and we expected a higher correlation between rules and support. The other correlations are in line with our expectations.

Discussion

All scales, except the descriptive scale for the rules orientation, have alpha's that meet the criterion of Nunnally (1978). We find a good descriptive scale for the rules orientation in each participating country. However, due to national cultural effects some rules items are good items in one country, but not in others. We tested the idea of circumplexity through portico correlation analyses. Concerning the results of the descriptive part, one could argue that this idea is supported. The value-characteristic scale of the support orientation, however, correlates too highly with the value-characteristic scale of the goal orientation.

STUDY 2: THE INFLUENCE OF COUNTRY, SECTOR, AND ORGANIZATION ON ORGANIZATIONAL CULTURE (Some preliminary results)

In the introduction we wrote that it is becoming increasingly important to understand the influence of national cultural aspects on organizations. The FOCUS group developed the questionnaire not only to measure organizational culture, but also to investigate the relationships between country, sector, and organizational culture.

Hofstede (1991) made a distinction between practices and values. The practices, e.g. the way people dress and the use of the same fashionable words, are manifestations of culture. They are the direct observable aspects of culture. Values represent more basic aspects of culture. These values are basic, because they are learned in childhood and at school. According to Hofstede the values are programmed in our mind during these years. The organizational practices are learned through socialization processes in the organization. On basis of his culture studies Hofstede argued (p. 183) that "employees values differed more

according to criteria like nationality, age and education of the employees than according to their membership of the organization *per se*". Organizational culture concerns the shared perceptions of daily practices (pp. 182–183). This definition is completely in line with the definitions of organizational climate (the shared perception of the way thing are done in on organization).

The FOCUS-questionnaire contains a descriptive part (practices) and a value-characteristic part. Following Hofstede's suggestions one could argue that, within a country, organizations differ mostly in their practices. The organizational values are mainly determined by the dominant values within a given society. From a cross-cultural perspective organizations differ partly in values due to the country values.

Another argument is that technology and market demands further the standardization of certain organizational practices (Bolwijn & Kumpe, 1992). This would imply that not only the variable organization, but also the variable "sector" explains differences in organizational practices. As the market demands are stronger than organizational values, organizations within the same sector should have more or less the same kind of practices. So banks in France should be more similar to banks in Italy than to hospitals in France. The values of French banks should be more in line with the values of the French hospitals than with the values of the banks in Italy.

We examined the next explorative questions: (1) what is the relationship between country organizational culture? (2) What is the relationship between sector and organizational culture? (3) What is the relationship between country and the individual perceptions of organizational culture? (4) What is the relationship between sector and the individual perceptions of organizational culture? (5) What is the relationship between the organization and the individual perceptions of organization culture?

Sample

Six countries were more or less comparable on the hospitals, finance, food, and industry sectors. These countries were Belgium, Croatia, Greece, Hungary, The Netherlands, and Portugal (see also Table 1). In these countries 4400 employees of 61 organizations filled out the FOCUS'93 questionnaire. These organizations varied in size and core business. There were 14 hospitals 17 banks, 14 food companies and 16 organizations from industry. In each organization a sample was drawn from workers and middle managers. Top managers also filled out the questionnaire.

Results

The nature of this study is explorative. Table 12 shows the amount of explained variance (eta) of the variables country, sector, and their interaction effect on organizational culture. The level of analysis was the organization. All

individual data were aggregated to this level. Country explained much of the variance in both the descriptive (practices) part and the value-characteristic part for the four cultural orientations. Sector only explained some variance on the descriptive scale of the innovation orientation. The interaction effect is significant for all the descriptive scales and for the value-characteristic scales, support, rules, and goal.

Table 13 shows the results for the individual perceptions. In this way we could test the assumption that organization will influence the perception of the individuals. Although, all variables (country, sector, organization, all the four cultural orientations, only country and organization have substantial effects. Organization is important for all the cultural orientations. Country explained more variance in the value-characteristic part than in the descriptive part.

Discussion

We addressed five explorative questions. The first concerned the influence of country on organizational culture. Following Hofstede (1991), we expected that country (question 1) mainly influenced values (value-characteristic part).

TABLE 12
The explained variance in organizational culture by the independent variables on organizational culture on organizational level (n = 60; 6 countries)

	Descriptive				*Evaluative*			
	Support	*Innovation*	*Rules*	*Goal*	*Support*	*Innovation*	*Rules*	*Goal*
Country	.21**	.27***	.31***	.37***	.68***	.47***	.43***	.49**
Sector		.12*						
Both	.43**	.29*	.28*	.24*	.14*		.30**	.24*

*$P < .05$; **$P < .005$; ***$P < .001$.

TABLE 13
The explained variance on organizational culture by the independent variables on organizational culture on individual level (n = 4344; 6 countries)

	Descriptive				*Evaluative*			
	Support	*Innovation*	*Rules*	*Goal*	*Support*	*Innovation*	*Rules*	*Goal*
Country	.05**	.06**	.06**	.10**	.22**	.16**	.10**	.16**
Sector	.006**	.05**	.009**	.05**	.003**	.004**	.01*	.01**
Both	.05**	.05**	.05**	.06**	.02**	.04**	.06**	.06**
Organization	.19**	.24**	.15**	.27**	.45**	.31 **	.20**	.28**

*$P < .05$; **$P < .001$.

Because of standardization in technology and uniform market demands within sectors we assumed that sector (question 2) mainly influenced the practices (the descriptive part). The results show that country indeed explained more variance in the value-characteristic part of the questionnaire than the descriptive part. Sector, however, did not explain variance in most of the descriptive scales. One could conclude that market demands are less coercing on behaviour than expected. On the individual level it seems that sector (question 4) does not influence the perceptions of organizational culture. Country (question 3) however, is of importance especially for the value part. Most of the variance concerning practices and values is explained by the organization itself (question 5). This would imply that within countries cultures could differ from each other as well as between countries.

Although the results are preliminarily, this should be a warning not only to search for difference between countries to explain differences between organizations from different countries. Furthermore, the results show that country influence is larger on the aggregated level than on individual level. In future research one should pay attention to the level of analysis.

IN CONCLUSION

The aim of the research group was to construct an internationally useful instrument for measuring organizational culture in European companies. From the construction history it becomes clear this is not an easy task. After the different phases of construction the instrument has its value, but certainly also its limitations. The conceptual model used for the construction cannot always be validated (see also Vandenberghe & Peiró, this issue). The formulation of the items in the different languages was intended to create a useful international instrument and may be called satisfactory. In general, it is easier to do research within one country, but, from a research point of view as well as for multinational companies, internationally useful instruments are needed. This research effort demonstrates that is feasible, but that one should always remain aware of the limitations of international instruments.

REFERENCES

Barley, S.R. (1983). Semiotics and the study of occupational and organizational cultures. *Administrative Science Quarterly*, *28*, 393–413.

Bolwijn, P.T., & Kumpe, T. (1992). *Marktgericht ondernemen.* Assen, The Netherlands: Van Gorcum.

Brown, A. (1995). *Organisational Culture.* London: Pitman.

Cohen, A. (1974). *Two-dimensional man: An essay on the anthropology of power and symbolism in complex society*. Berkeley, CA: University of California Press.

Czarniawska-Joerges, B. (1992). *Exploring complex organizations.* Newbury Park, CA: Sage.

Den Hartog, D.N., House, R.J., & other Globe country investigators. (1999). Culture specific and cross-culturally generalizable implicit leadership theories: Are attributes of charismatic/transformational leadership universally endorsed? *Leadership Quarterly*, *10*, 219–256.

Denison, D.R. (1990). *Corporate culture and organizational effectiveness*. New York: Wiley.

Denison, D.R. (1996). What is the difference between organizational culture and organizational climate? A native' s point of view on a decade of paradigm wars. *Academy of Management Review 3*, 619–654.

Denison, D.R., & Mishra, A. (1995). Toward a theory of organizational culture and effectiveness. *Organizational Science*, *6*, 204–223.

De Witte, K., & De Cock, G. (1986). Organizational climate: Its relation with managerial activities or communication structures. In G. Debus & H.W. Schroiff (Eds), *The psychology of work and organization: Current trends and issues*. Amsterdam: North Holland.

Drexler, J. (1977). Organizational climate: Its homogenity within organizations. *Journal of Applied Psychology*, *62*, 38–42.

Ekvall, G. (1987). The climate metaphor in organizational theory. In B.M. Bass & P.J.D. Drenth (Eds), *Advances in organization psychology* (pp. 177–190). Beverly Hills, CA: Sage.

Geertz, C. (1973). *The interpretation of cultures*. New York: Basic Books.

Hemker, B.T. (1996) *Unidimentional IRT model for polytomous items, with result for Mokken scale analysis*. Unpublished dissertation, University of Utrecht.

Hemker, B.T., & Sijtsma, K. (1993). A practical comparison between the weighted and the unweighted scalability coefficients of the Mokken model. *Kwantitatieve Methode*, *14*, 59–73.

Hemker, B.T., Sijtsma, K., & Molenaar, W. (1995). Theoretical results and item selection from a multidimensional item bank in the Mokken IRT model for polytomous items. *Applied Psychological Measurement*, *19*, 337–352.

Hofstede, G. (1984). *Culture's consequences*. London: Sage.

Hofstede, G. (1991). *Cultures and organizations*. London: McGraw-Hill.

Hofstede, G., Neuijen, J.A., Ohayv, D. & Sanders, G. (1990). Measuring organizational culture: A qualitative/quantitative study across twenty cases. *Administrative Science Quarterly*, *35*, 286–316.

House, R.J., Hanges, P.J., Ruiz-Quintanilla, S.A., Dorfman, P.W., Javidan, M., Dickson, M., & 170 co-authors. (1999). Cultural influences on leadership and organizations: Project GLOBE. In W. Mobley, M.J.H. Gessner, & V. Arnold (Eds), *Advances in global leadership* (pp. 171–233). Stamford, CN: Jai Press.

James, L.R., James, L.A., & Ashe, D.K. (1990). The meaning of organizations: The role of cognition and values. In B. Schneider (Ed.), *Organizational climate and culture* (pp. 40–85). San Francisco: Jossey-Bass.

Kline, P. (1986). *A handbook of test construction*. London: Methuen.

Lewin, K., Lippitt, R., & White, R.K. (1939). Patterns of aggressive behaviour in experimentally created “social climates”. *Journal of Social Psychology, 10,* 271–299.

Loevinger, J. (1984). The technique of homogeneous tests compared with some aspects of scale analysis and factor analysis. *Psychological Bulletin*, *9*, 375–387.

Martin, J. (1992). *Cultures in organizations*. New York: Oxford University Press.

Meijer, R.R., Sijtsma, K., & Smid, N.G. (1990). Theoretical and empirical comparison of the Mokken and Rasch approach to IRT. *Applied Psychological Measurement*, *14*, 283–298.

Mokken, R.J. (1971). *A theory and procedure of scale analyses*. The Hague, The Netherlands: Mouton.

Molenaar, I.W. (1982). Mokken scaling revisited. *Kwantitatieve Methoden*, *8*, 145–164.

Molenaar, I.W. (1986). Een vingeroefening in item response theorie voor drie geordende antwoordcategorieën. In G.F. Pikkemaot & J.J.A. Moors (Ed.). *Liber Amicorum Jaap Muilwijk*. Groningen, The Netherlands: Economisch Instituut.

Molenaar, I.W. (1991). A weighted Loevinger H-coefficient extending Mokken scaling to multicategory items. *Kwantitative Methoden*, *12*, 97–117.

Molenaar, I.W. (1996). Nonparametric models for polytomous responses. In W.J. van der Linden & R.K. Hambleton (Eds), *Handbook of modern psychometrics*. New York: Springer.

Nunnally, J.C. (1978). *Psychometric theory.* New York: McGraw-Hill.

Pugh, D., Clark, T., & Mallory, G. (1996). Organizational structure and structural change in European manufacturing organizations. In P.J.D. Drenth, P.L., Koopman, & B. Wilpert, (Eds), *Organizational decision making under different economic and political conditions* (pp. 225–238). KNAW: North Holland.

Quinn, R.E. (1988). *Beyond rational management.* San Francisco: Jossey-Bass.

Reiches, A.E., & Schneider, B. (1990). Climate and culture: An evolution of constructs. In B. Schneider, (Ed.), *Organizational climate and culture* (pp. 5–40). San Francisco: Jossey-Bass.

Rentsch, J.R. (1990). Climate and culture: Interaction and qualitative differences in organizational meanings. *Journal of Applied Psychology*, *75*, 668–681.

Rousseau, D.M. (1990). Assessing organizational culture: The case for multiple methods. In B. Schneider B. (Ed.), *Organizational climate and culture* (pp. 153–193). San Francisco: Jossey-Bass.

Schneider, B. (1975). Organizational climate: An essay. *Personnel Psychology*, *28*, 447–479.

Schwatz, H., & Davis, S. (1981). Matching co-operate culture and business strategy. *Organizational Dynamics*, *10*, 30–38.

Sijtsma, K. (1988). *Contributions to Mokken's nonparametric item response theory.* Unpublished dissertation. Free University, Amsterdam.

Smircich, L. (1983). Concepts of culture and organizational analysis. *Administrative Science Quarterly*, *28*, 339–358.

Smith, P.B., Misumi, J. Tayeb, M.H., Peterson, M.F., & Bond, M.H. (1989). On the generality of leadership styles across culture. *Journal of Occupational Psychology*, *62*, 977–1110.

Smith, P.B., Dungan, S., & Trompenaars, F. (1996). National culture and the values of organization's employees. *Journal of Cross-cultural Psychology*, *27*, 231–264.

Trice, H.M., & Beyer, J.M. (1993). *The culture of work organizations*. Englewood Cliffs, NJ: Prentice Hall.

Van Muijen, J.J. (1994). *Organisatieklimaat en organizatiecultuur.* Unpublished dissertation. Free University, Amsterdam.

Van Muijen, J.J., Koopman, P.L., Dondeyne, P., De Cock, G., & De Witte, K. (1992). Organizational culture, the development of an international instrument for comparing countries. In G. Hunyady (Ed.), *Proceedings of the 2nd European congress of psychology* (pp. 249–259). Budapest, Hungary: A jtósi Dúver.

Van Muijen, J.J., & Koopman, P.L. (1994). The influence of national culture on organizational culture: A comparative study between 10 countries. *The European Work and Organizational Psychologist*, *4*, 367–380.

Van Muijen, J.J., Koopman, P.L., & DeWitte, K. (1996). *FOCUS op organisatiecultuur.* Schoonhoven, The Netherlands: Academic Service.

Van Muijen, J.J. (1998). Organizational culture. In P.J.D. Drenth, H. Thierry, & C. De Wolff (Eds), *Handbook of work and organizational psychology* (2nd ed.) Hove, UK: Psychology Press.

Volkstrant. (31 July, 1999). KLM'ers gaan later aan tafel voor Italianen, p. 1.